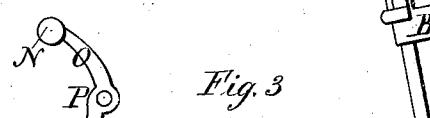
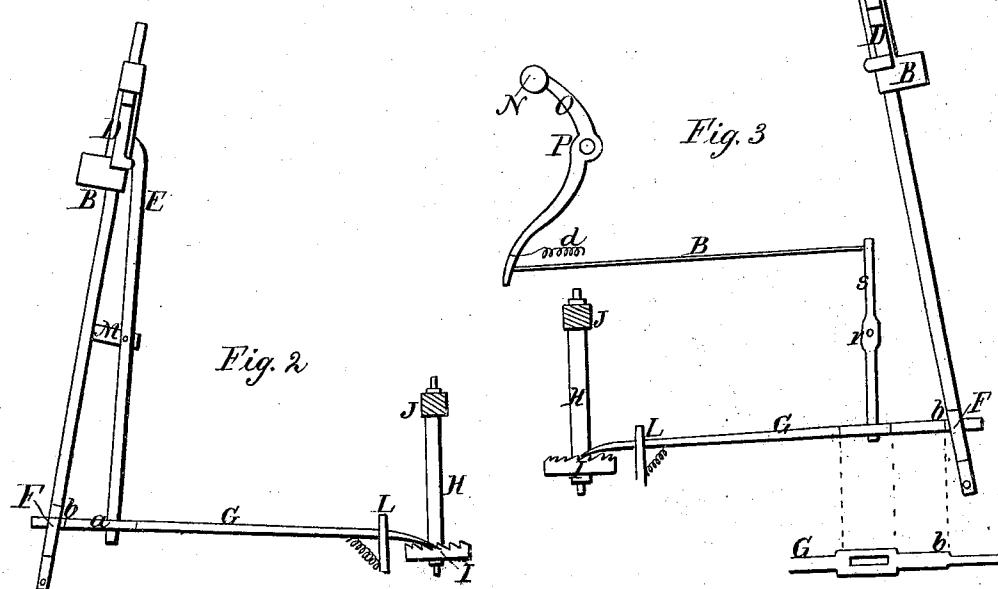
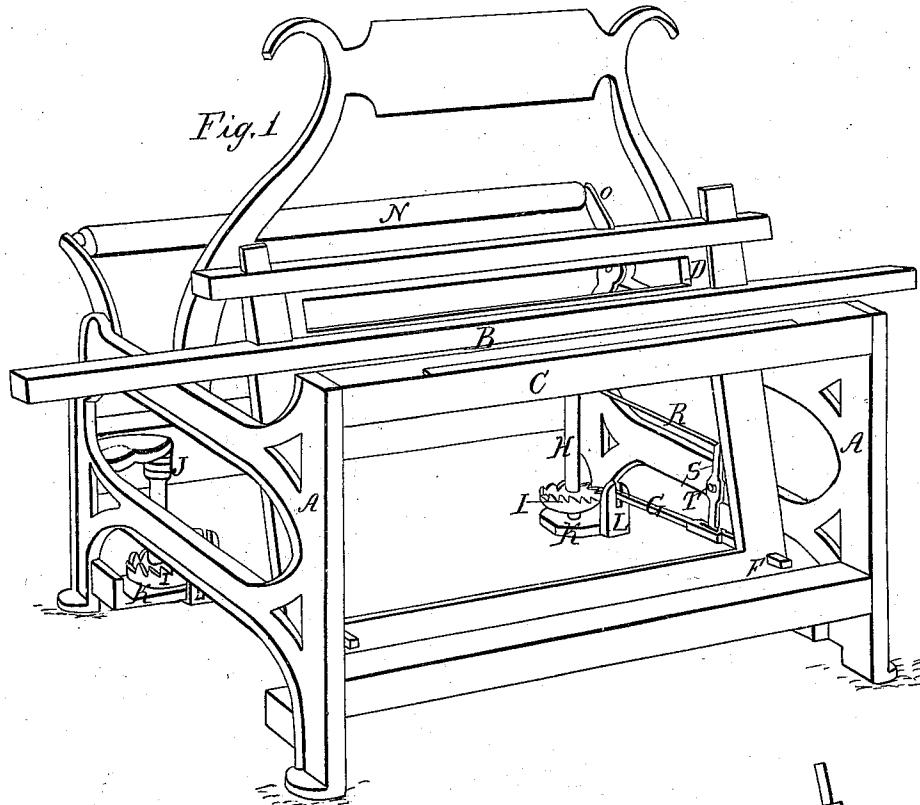


*W. A. Potter*  
*Take-Up and Let-Off.*

*N<sup>o</sup> 475.*

*Patented Nov. 23, 1837.*



# UNITED STATES PATENT OFFICE.

WELCOME A. POTTER, OF CRANSTON, RHODE ISLAND.

## MODE OF REGULATING THE MOTION OF YARN-BEAMS IN POWER-LOOMS.

Specification of Letters Patent No. 475, dated November 23, 1837.

To all whom it may concern:

Be it known that I, WELCOME A. POTTER, of Cranston, in the county of Providence and State of Rhode Island, have invented 5 a new and improved method of regulating the movement of yarn-beams in power-looms, whereby the movements of the yarn-beams are so regulated as to produce fabrics of a regular and uniform thickness throughout; and I do hereby declare that the following 10 is a full and exact description thereof.

Figure 1, perspective view of the power loom A, A, being the frame, B, lathe, and C, the breast beam. These, with various 15 other parts of the loom, which do not differ from those in use, do not, of course, require any particular description. Figs. 2 and 3, are sectional views of two modifications of the arrangement of my apparatus, one 20 shown as at the left, and the other as at the right hand end of the loom.

In each of the figures when the same parts are represented, they are designated by the same letters of reference.

25 In Fig. 2, B, is the lathe, D, the spring reed, and E a lever extending down nearly as low as the bottom of the lathe sword. F, is the part of the lathe in which the bar slides, G, the bar, H a vertical shaft having 30 a ratchet wheel I, on its lower, and the worm wheel J, on its upper end, which operates, by gearing, to give the requisite motion to the yarn beam. K, is the step of the vertical shaft, and L, a guide piece having a 35 notch or mortise in it to receive and guide the bar G, which acts upon the ratchet wheel.

The following is the manner in which the bar G, receives its motion from the spring 40 reed. When the lathe advances forward, and brings the reed into contact with the cloth, the springing of the reed throws the top of the lever E back, say from one eighth to one fourth of an inch, and as this works 45 upon a fulcrum M, in the lathe, and its lower end passes into a mortise, or slot at a, in the bar G, the lower end of the lever, bearing against the fore end of this slot, draws the rod forward, by the back motion of

its upper end; and the back end of the 50 bar G, then catches upon a tooth of the ratchet wheel, to which wheel it will give motion when the lathe is thrown back; this force is effected by the sword of the lathe coming into contact with a shoulder at b, 55 thus forcing the bar back and turning the ratchet wheel; the shaft H then moving the yarn beam by means of suitable gearing from the worm wheel.

The foregoing description represents the 60 bar G, as receiving its motion through the agency of the spring reed; but I sometimes communicate it through that of the spring whip roll, as shown in Fig. 3. The whip roll N, is supported by a bearing piece o, 65 there being a similar one at its other end. The bearing piece o, works on a fulcrum P, made fast to the frame of the loom, said bearing piece extending to about an equal distance from the fulcrum at each end. A 70 spring a', acts upon the lower end of the bearing piece, for the purpose of holding it in its proper position, when not acted upon by any other force.

When the lathe vibrates forward, and the 75 reed presses forcibly on the cloth, this has the effect of drawing the whip roll, forward and causing the lower end of the bearing piece to recede; from this lower end, a rod, or wire R, extends to a lever S, working on a fulcrum T, on the frame of the loom, its lower end passing into a mortise, or slot, in the bar G, which is operated upon in a manner similar to that of the lever E, already described. In both cases this mor- 85 tise or slot must be long enough to give play to G, without moving the levers E, or S.

What I claim as my improvement in the power loom is—

The construction and conversion of the 90 bar G, which construction and conversion determines the manner it is operated on by the levers E and S, and the manner it operates the perpendicular shaft H, as described.

WELCOME A. POTTER.

Witnesses:

CLEMENT HOOTE,  
LINTON THORN.